Real-Time Big Data Analytics for Live Streaming Video Quality Assessment Using Deep Learning

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In recent years, live streaming video has become increasingly popular, necessitating real-time big data analytics to evaluate streaming video content. In this article, it provides a framework for assessing the quality of live broadcast video using big data analytics and deep learning in real time. Our framework comprises various modules, including collection of data, preprocessing, extraction of features, selection of features, and categorization based on deep learning. To determine the quality of the streaming video, we assess a variety of video characteristics, including resolution, bit rate, frame rate, and packet loss rate. Using convolutional neural networks (CNNs), our deep learning models categorise the streaming video quality into various categories. Using real-world streaming video datasets, we evaluate our framework's performance. The results demonstrate that our proposed framework is able to efficiently analyse the quality of streaming video in real-time, outperforming other state-of-the-art frameworks. Our framework provides live streaming platforms with a tool for delivering high-quality streaming video to their consumers.

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In recent years, there has been a meteoric rise in the popularity of live streaming video, with millions of consumers now streaming video material on a daily basis. It is vital to design a framework that is able to evaluate the quality of the streaming video in real time in order to provide viewers with a high-quality experience. This will guarantee that consumers have a positive experience. In this research, we offer a unique methodology for assessing the quality of live streaming video that makes use of deep learning methods. A number of different modules, such as data collecting, pre-processing, feature extraction, feature selection, and classification based on deep learning, are all included within our system.

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